

**Abstract of th Invention**

The present invention discloses a novel secreted polypeptide, termed osteoprotegerin, which is a member of the tumor necrosis factor receptor superfamily and is involved in the regulation of bone metabolism. Also disclosed are nucleic acids encoding osteoprotegerin, polypeptides, recombinant vectors and host cells for expression, antibodies which bind OPG, and pharmaceutical compositions. The polypeptides are used to treat bone diseases characterized by increased resorption such as osteoporosis. Methods of treatment are described using the polypeptides in conjunction with various agents, including IL-1 inhibitors, TNF- $\alpha$  inhibitors, and serine protease inhibitors.

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